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[Continued on next page]

(54) Title: POLYPEPTIDE PARTICIPATING IN PYRIDOXINE BIOSYNTHESIS, A POLYNUCLEOTIDE CODING THE POLYPEPTIDE AND THOSE USES

At5g10410 -----MEG---TGTVAVYVNGAITEAK-KSPFSVKVGLAQMRLGGVIMDVVNAEQARIAEE 52
At2g38230 -----MAG---TGTVAVYVNGAITEAK-KSPFSVKVGLAQMRLGGVIMDVVNAEQARIAEE 53
At3g16050 MADQAMTDQDQAVTLYSGTATIDAKKNHPPSVKVLGAQVLRGGAIVEVSSVNAQKLAES 60
snz3 -----MS-----EFKVKVTGLAQMRLGGVIMDVVTPQAIIAER 33
snz2 -----MS-----EFKVKVTGLAQMRLGGVIMDVVTPQAIIAER 33
snz1 -----MTG-----EDFKIKSGLAQMRLGGVIMDVVTPQAIIAER 35
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At5g10410 AGACAVMALERVVPADIRAQGGVARMSPDPQMIKEIKQAVTIPVMAKARIGHFVEAQILEAI 112
At2g38230 AGACAVMALERVVPADIRAQGGVARMSPDPQMIKEIKQAVTIPVMAKARIGHFVEAQILEAI 113
At3g16050 AGACSVVISD----FVRSRGGVRRMPDPVLIKEVKRAVSPVPMARARVGHFVEAQILESL 116
snz3 AGACAVMALERIPADMRKSGQVCRMSDPMIKEIMEAVSIPVMAKVRIGHFVEAQILEEL 93
snz2 AGACAVMALERIPADMRKSGQVCRMSDPMIKEIMEAVSIPVMAKVRIGHFVEAQILEEL 93
snz1 SGACAVMALESIPADMRKSGQVCRMSDPMIKEIMEAVSIPVMAKVRIGHFVEAQILEAL 95
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At2g38230 GVDYVDESEVLTLEADHINKHNFRIFFVCGCNRNLGEALRRIREGAAMIRTKG-EAGTG 172
At3g16050 AVDYIDSEIISVADDDHFINKHNFSPFICGCRDTGEALRRIREGAAMIRIQDILTATG 176
snz3 QVDYIDSEVLTTPADWTHIEKHNFVFPVFCGAKDLGEALRRINEGAAMIRTKG-EAGTG 152
snz2 QVDYIDSEVLTTPADWTHIEKHNFVFPVFCGAKDLGEALRRINEGAAMIRTKG-EAGTG 152
snz1 EVDYIDSEVLTTPADWTHIEKHNFVFPVFCGAKDLGEALRRINEGAAMIRTKG-EAGTG 154
* * * * *
At5g10410 NIIEAVRHVRVSVNGDIRVLN--MDDDEVFTFAKKLAAPYDLVMTKQLGRPLVVFQFAAG 229
At2g38230 NVVEAVRHVRVSVNGAIRLLRS--MDDDEVFTYAKKIAAPYDLVMTKQLGRPLVVFQFAAG 230
At3g16050 NIAETVKNVRSMLMGEVRVLN--MDDDEVFTFAKKISAPYDLVAQTKQMGVRVVFQFASG 234
snz3 DVSEAVKHITIKAEIQYKENLKTESDFAAKATELRVPVLLKTLTSEGKLPVVNFVFAAG 212
snz2 DVSEAVKHITIKAEIQYKENLKTESDFAAKATELRVPVLLKTLTSEGKLPVVNFVFAAG 212
snz1 DVSEAVKHITIRITEIKACQQ-LKSEDDIAKVAEMRVPVSLKDLVLEKGLPVVNFVFAAG 213
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At5g10410 GVATPADAALMMLGCDGVFVGSIGFSSDPFARRARAIVQAVTHYSDPEMLVEVSCGLGE 289
At2g38230 GVATPADAALMMLGCDGVFVGSIGFSSDPVKKRAIVQAVTNYRDAVLAEVSCGLGE 290
At3g16050 GITTADAALMMLGCDGVFVGSIEVDFGDPFPPKLLRSIVQAVGHYNDPHVLAEMSSGLE 294
snz3 GVATPADAALLMMLGCEGVFVGSIGFSSDPEKLCAIVEATTHYDNPAPKLLQVSSDLGD 272
snz2 GVATPADAALLMMLGCEGVFVGSIGFSSDPEKLCAIVEATTHYDNPAPKLLQVSSDLGD 272
snz1 GVATPADAALLMMLGCDGVFVGSIGFSSNPVRLATAVVEATTHYDNPAPKLLQVSSDLGD 273
* * * * *
At5g10410 AMVGINLNDKVERFANRSE----- 309
At2g38230 AMVGLNLD--KVERFASRSE----- 309
At3g16050 AMESLNVGRDRIQDFGQGSV----- 314
snz3 LMGGISIQSINEAGGKNGARLSEIGW 298
snz2 LMGGISIQSINEAGGKNGARLSEIGW 298
snz1 LMGGSIESISHAS--NGVRLSEIGW 297
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(57) Abstract: The present invention discloses a polypeptide participating in pyridoxine biosynthesis, a polynucleotide coding the polypeptide and those uses. Particularly, this present invention discloses a polypeptide participating in pyridoxine biosynthesis, a polynucleotide coding the polypeptide, a method for inducing plant growth inhibition, a method for screening a compound inducing plant growth inhibition, and composition for inducing plant growth inhibition which comprises the compound obtained by the screening method.

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